

**Aviation Safety Investigation Report  
199703056**

**Jabiru  
LSA 55/3J**

**16 September 1997**

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**NOTE: All air safety occurrences reported to the ATSB are categorised and recorded. For a detailed explanation on Category definitions please refer to the ATSB website at [www.atsb.gov.au](http://www.atsb.gov.au).**

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<b>Occurrence Number:</b>	199703056	<b>Occurrence Type:</b>	Incident
<b>Location:</b>	Narrogin, (ALA)		
<b>State:</b>	WA	<b>Inv Category:</b>	4
<b>Date:</b>	Tuesday 16 September 1997		
<b>Time:</b>		<b>Time Zone</b>	WST
<b>Highest Injury Level:</b>	None		

**Aircraft Manufacturer:** Jabiru  
**Aircraft Model:** LSA 55/3J  
**Aircraft Registration:** 55-1831    **Serial Number:**  
**Type of Operation:**  
**Damage to Aircraft:** Nil  
**Departure Point:**  
**Departure Time:**  
**Destination:**

**Approved for Release:** Tuesday, May 26, 1998

During a maintenance investigation for an oil leak on the aircraft's Jabiru 2200cc engine, it was discovered that two flywheel-to-crankshaft retention cap screws had failed. The remaining four retention cap screws also showed signs of impending failure. The engine had operated for approximately 226 hours.

The operator had previously experienced a complete failure of all six retention cap screws, during start-up, on another 2200cc engine that was fitted to this aircraft. This failure occurred at approximately 274 engine hours. The operator had also experienced problems with cracking of the engine rocker assemblies.

Although the aircraft was operated under Australian Ultralight Federation (AUF) requirements, the aircraft type was certificated to operate as an Australian registered aircraft. However, the Jabiru 2200cc and 1600cc series engine types had not been certificated, but were accepted for use in Australia under the auspices of CAO 101.55. This aircraft was one of the first to be fitted with the Jabiru 2200cc series engine.

#### SAFETY ACTION

As a result of this occurrence, technical personnel from the Bureau of Air Safety Investigation met with CASA to discuss the Jabiru engine certification issue, and the flywheel cap screw failures. CASA advised that both the Jabiru 1600cc and 2200cc engines were currently undergoing certification. The Jabiru 2200cc engine is to comply with JAR 22H. CASA indicated that they will consider the Jabiru engine flywheel retention cap screw failures as part of the certification process.

The Bureau of Air Safety Investigation will continue monitoring the certification of the Jabiru 1600cc and 2200cc engines.

